

REMARKS

The Substitute Specification has been amended in paragraph [0042] to correct a typographical error.

The Examiner had noted that the specification as filed made reference to a trademark "Hitachi". Applicants would like to point out that the reference was instead to the company Hitachi, Ltd., and the Substitute Specification has been amended in paragraph [0049] accordingly.

The Examiner has objected to Applicants' Amendment filed December 18, 2008, as introducing new matter into the disclosure in that the sentence portion "the EEPROM data (including the Asset Key A_K is decrypted in decrypter D with the CID key, and..." is not supported by the original disclosure.

Applicants first would like to point out that as noted above in the amendment to the Substitute Specification, there should be a "close" parenthesis after A_K . As clearly noted in the specification as filed, on page 8, lines 7-8, "The encrypted Asset Keys and Rights, $E_{CID_key}(A_K, Rights)$, are stored in the EEPROM 4." Now, referring to Fig. 3, the contents of the storage unit 4, i.e., EEPROM 4, is applied to the decrypter D in the security module 7 which also receives the CID key. Thereafter, the Rights are output from the security module, while the Asset Keys A_K is applied to the decryption module D. It is well-established that the drawings are considered a part of the disclosure as filed. As such, Applicants

are allowed to add to the specification that which is disclosed in the drawings as filed.

In view of the above, Applicants believe that no new matter has been inserted into the Substitute Specification.

The claims have been amended to more clearly define the invention as disclosed in the written description. In particular, claims 2, 5 and 14 have been amended to clarify the issue regarding the antecedent basis of "the expiration date".

Applicants believe that the above changes answer the Examiner's objection to claims 1 and 16, and the Examiner's 35 U.S.C. 112, paragraph 2, rejection of claims 5 and 14, and respectfully request withdrawal thereof.

The Examiner has rejected claim 15 under 35 U.S.C. 101 in that the claimed invention is allegedly directed to non-statutory subject matter.

In response thereto, Applicants have amended claim 15 to clearly indicate "a hardware-implemented security module". As such, Applicants believe that claim 15 is indeed statutory under 35 U.S.C. 101.

The Examiner has rejected claims 1, 10 and 16 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0024905 to Kahlman et al. (erroneously referred to by the Examiner as Kahlamn et al.) in view of the article "A 25ns 16K CMOS PROM using a 4-Transistor Cell", by Pathak et al. The Examiner has further rejected claims 2-7 under 35 U.S.C. 103(a) as being unpatentable over Kahlman et al. in view of Pathak

et al., and further in view of U.S. Patent 6,266,481 to Lee et al. In addition, the Examiner has rejected claim 8 under 35 U.S.C. 103(a) as being unpatentable over Kahlman et al. in view of Pathak et al., and further in view of U.S. Patent 3,028,659 to Chow et al. Furthermore, the Examiner has rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Kahlman et al. in view of Pathak et al., and further in view of U.S. Patent 6,369,421 to Xiang et al. Finally, the Examiner has rejected claims 11-15 under 35 U.S.C. 103(a) as being unpatentable over Kahlman et al. in view of Pathak et al. and Lee et al., and further in view of U.S. Patent Application Publication No. 2002/0162057 to Talagala.

The Kahlman et al. application discloses a record carrier having an information area for storing information, and an integrated circuit comprising a storage unit for storing additional information, in which the additional information comprises a key for scrambling and/or descrambling the information to be stored and/or already stored on the record carrier in the information area.

The Pathak et al. article discloses the existence of an electronic memory having an extended data retention period.

The Examiner states:

"Kahlamn teaches a record carrier [figure 1] comprising an information area for storing information [first area: paragraph 0001], and an integrated circuit comprising a storage unit [second area: paragraph 0001] for storing additional information (AK) [key: paragraph 0010], the integrated circuit further comprising a memory

[paragraph 0006 and claim 6] *comprising a resurrection key for use in restoring (descrambling) the additional information* [paragraph 0023 lines 4-6]."

Applicants believe that the Examiner is mis-reading Kahlman et al. In particular, in Kahlman et al., the "memory" cited in paragraph [0006] is the same as the storage unit of the subject invention, i.e., it stores the "additional information" for enabling access to the information stored on the record carrier in the first area. This additional information may include an Asset Key AK used for scrambling/descrambling the information stored on the record carrier in the information area, or Rights (DRM) used to control access to the information stored on the record carrier in the information area. However, there is no disclosure in Kahlman et al. that the integrated circuit comprises the storage unit for storing the additional information, and **the integrated circuit further comprising a one-time programmable memory comprising a resurrection key for use in restoring the additional information.**

Further, while the Examiner suggests that the resurrection key RK is disclosed in Kahlman et al. in paragraph [0023], it should be noted that the "key" described in paragraph [0023] is used to scramble/descramble the information in the first area of the record carrier, i.e., the same key that is being described in general in the Summary of paragraph [0010]. However, there is no disclosure or suggestion of a resurrection key RK "for use in restoring the additional information" stored in the storage unit,

as opposed to the information stored in the information area of the record carrier.

The Examiner now states:

"10....However, Kahlamn in paragraph 0001 teaches that the record carrier has two separate areas and figure 1.

"11. It has been argued (pages 13 and 14 of the remarks) that Kahlamn does not teach that the key is used for restoring the additional information.

"12. Applicant's interpretation of the reference is noted. However, Kahlamn in paragraphs 0010 and 0023 teaches the usage of the key in descrambling the information and hence restoring it to its original form."

Applicants caution the Examiner to be aware of the terminology used in the claims as well as in the specification. In particular, the record carrier of Kahlman et al., and of the subject invention, includes a first area for storing "information". This "information" is being stored optically on the record carrier. In addition, the record carrier of Kahlman et al., and of the subject invention, includes a second area comprising an integrated circuit. This second area integrated circuit of Kahlman et al., and of the subject invention, comprises a storage unit for storing additional information, i.e., the Asset Keys A_K which may be used in descrambling the "information" optically stored in the first area. However, in addition to the above, as claimed in claim 1, "the integrated circuit further comprising a one-time programmable memory comprising a resurrection key for use in restoring the additional information". Hence, the subject invention includes 3 places for storing data, i.e., (1) the first area (storing the optical information), (2) the second area integrated circuit

storage unit (for storing the additional information), and (3) the second area integrated circuit one-time programmable memory (for storing the resurrection key for restoring the additional information).

Paragraphs [0010] of Kahlman et al. states:

"A further embodiment of the record carrier according to the invention is characterized in that the additional information comprises a key for scrambling and/or descrambling the information. The key makes it possible to scramble the information stored in the first area on the record carrier and descramble the information stored in the first area."

Paragraph [0023] states:

"The device 6 further comprises receiving and transmitting means 5 for receiving and transmitting additional information stored in the integrated circuit which is present in the second area 4 on the record carrier 1. In a preferred embodiment, this additional information comprises a key for scrambling and/or descrambling the information."

First, it should be apparent that in paragraph [0023], Kahlman et al. is merely describing in detail what is stated in paragraph [0010], i.e., the additional information stored in the integrated circuit storage unit may be used to scramble (or encrypt) the information stored in the first area (i.e., the information optically recorded on the record carrier). However, Applicants submit that this is not the thrust of the subject invention. Rather, as claimed in claim 1, "the integrated circuit further comprising a one-time programmable memory comprising a resurrection key for use in restoring the additional information". As explained above, the "additional information" being restored is not the "information" stored in the first area of the record

carrier, but rather is the "additional information" stored in the integrated circuit storage unit, which is the "key" being used to scramble/encrypt the information stored in the first area of the record carrier.

Applicants submit that there is no disclosure or suggestion in Kahlman et al. of "the integrated circuit further comprising a one-time programmable memory comprising a resurrection key for use in restoring the additional information".

While Pathak et al. arguably teaches a memory having a substantially larger data retention time than the storage unit (or memory) of Kahlman et al., Applicants submit that there is no disclosure or suggestion in Kahlman et al. that the memory of Pathak et al. should be combined with the storage unit (or memory) already in Kahlman et al., and that this added memory should comprise a resurrection key for use in restoring the additional information stored in the storage unit (or memory) of Kahlman et al. which had become corrupted.

The Lee et al. patent discloses a conditional access system for local storage device, in which a memory has stored the expiration date data associated with the selected program. However, Applicants submit that Lee et al. does not supply that which is missing from Kahlman et al. and Pathak et al., i.e., a record carrier having an information area for storing information, and an integrated circuit having a storage area for storing additional information and a memory comprising a resurrection key for use in restoring the additional information.

The Chow et al. patent discloses a storage matrix which arguably may be referred to as fuse-logic. However, Applicants submit that Chow et al. does not supply that which is missing from Kahlman et al. and Pathak et al., i.e., a record carrier having an information area for storing information, and an integrated circuit having a storage area for storing additional information and a memory comprising a resurrection key for use in restoring the additional information.

The Xiang et al. patent discloses an EEPROM having stacked dielectric to increase programming speed, which arguably has a data retention time of 10 years. However, Applicants submit that Xiang et al. does not supply that which is missing from Kahlman et al. and Pathak et al., i.e., a record carrier having an information area for storing information, and an integrated circuit having a storage area for storing additional information and a memory comprising a resurrection key for use in restoring the additional information.

The Talagala patent publication discloses a data integrity monitoring storage system in which data is checked and if errors are discovered, the data is repaired or restored. However, Applicants submit that Talagala does not supply that which is missing from Kahlman et al., Pathak et al. and Lee et al., i.e., a record carrier having an information area for storing information, and an integrated circuit having a storage area for storing additional information and a memory comprising a resurrection key for use in restoring the additional information.

In view of the above, Applicants believe that the subject invention, as claimed, is not rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicants believe that this application, containing claims 1-16, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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